

Remarks/Arguments

Reconsideration of this application is requested.

Election/Restriction

Claims 1-8 have been elected for prosecution. Accordingly, claims 9-22 are canceled, without prejudice.

Claim Status

Claims 1-22 were originally presented in this application. By this amendment, claims 5 and 9-22 are canceled, and claims 1 and 6-8 are amended. Accordingly, after entry of this amendment, claims 1-4 and 6-8 are pending.

Claim Rejections – 35 USC 112

Claims 5 and 6 are rejected under 35 USC 112, second paragraph, as indefinite. The Action asserts that because the first and second substrates are bent with openings they do not have a rectangular shape. Applicant respectfully traverses this rejection. Substrates 20 and 40 are clearly described in the specification as having a rectangular shape (see page 9, paragraph [0022]). While substrates 20 and 40 may not have a rectangular shape when viewed from the side or in section, they will still clearly have a rectangular shape when viewed from above.

In order to clarify claim 6 and to bring it into clear compliance with 35 USC 112, claim 6 is amended to clarify that the substrates have a rectangular shape when viewed from above. As noted above, claim 5 is canceled.

Claim Rejections -35 USC 102

Claims 1-3 and 5 are rejected under 35 USC 102(b) as anticipated by Tomita (USP 6,084,294). In response, independent claim 1 is amended to clearly distinguish over Tomita.

Tomita discloses, in Figure 2, a semiconductor device formed by stacking semiconductor elements 1 and flexible substrates 3 on a mounting board 14. Lead wires 4 extend from one side (“a major surface”) of each of flexible substrates 3 down to mounting board 14. That is, a lead wire 4 extends from the right side, but

not the left side, of the lower flexible substrate 3; and another lead wire 4 extends from the left side, but not the right side, of the upper flexible substrate 3.

Claim 1 (as amended), conversely, recites a semiconductor device having a first substrate that extends from a first side to a second side of the base substrate; and a second substrate that extends from a third side to a fourth side of the base substrate. In this regard, it is noted that none of Tomita's disclosed embodiments show substrates that extend between different surfaces of the base substrate. Moreover, claim 1 requires that the first substrate include first wiring that connects to the base wiring on both the first and second sides of the base substrate, and that the second substrate includes second wiring that connects to the base substrate on both the third and fourth sides of the base substrate.

In Fig.2 of Tomita, conversely, the lower lead wire 4 extends only from a first side of the lower substrate 3 and connects only to a first side of the mounting plate 4. The upper lead wire 4 extends only from a second side of the upper substrate 3 and connects only to a second side of the mounting plate 14. There are no wires shown connecting to third and fourth sides of the mounting plate 14. Figure 6 of Tomita similarly fails to show wires connecting to third and fourth sides of the mounting plate 4 (all connections are between first and second sides).

For these reasons, it is submitted that claim 1, and claims 2-3 dependent thereon, are not anticipated by Tomita. The rejection with respect to claim 5 is moot since claim 5 has been canceled.

Claim Rejections – 35 USC 103

Claim 4 is rejected under 35 USC 103(a) as obvious over Tomita in view of DeGivry (USP 5,229,960). The Action asserts that DeGivry discloses semiconductor elements 14 and 16 having intersecting rectangular shapes. In other respects, however, DeGivry does not remedy the deficiencies of Tomita as applied to claim 1 and discussed above. DeGivry, taken alone or in combination with Tomita, does not disclose a stacked semiconductor and substrate structure configured and oriented as

required by independent claim 1. Hence, claim 4 distinguishes over Tomita and DeGivry by virtue of its dependency from claim 1.

Claim 6 is rejected under 35 USC 103(a) as obvious over Tomita in view of Kamei et al. (USP 6,462,412). The Action asserts that Kamei discloses first and second substrates having intersecting rectangular shapes. In other respects, however, Kamei does not remedy the deficiencies of Tomita as applied to claim 1 and discussed above. Kamei, taken alone or in combination with Tomita, does not disclose a stacked semiconductor and substrate structure configured and oriented as required by independent claim 1. Hence, claim 6 distinguishes over Tomita and Kamei by virtue of its dependency from claim 1.

Claims 7 and 8 are rejected under 35 USC 103(a) as obvious over Tomita in view of Hashimoto (USP 6,383,840). The Action asserts that Hashimoto discloses opening sections formed in the bent sections of the substrates. In other respects, however, Hashimoto does not remedy the deficiencies of Tomita as applied to claim 1 and discussed above. Hashimoto, taken alone or in combination with Tomita, does not disclose a stacked semiconductor and substrate structure configured and oriented as required by independent claim 1. Hence, claims 7 and 8 distinguish over Tomita and Hashimoto by virtue of their dependency from claim 1.

Conclusion

This application is now believed to be in condition for allowance. The Examiner is invited to telephone the undersigned to resolve any issues that remain after entry of this amendment. Any fees due with this response may be charged to our Deposit Account No. 50-1314.

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Respectfully submitted,
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